

<b>RGPV (DIPLOMA WING) BHOPAL</b>	<b>OBE CURRICULUM FOR Computer Graphics and Animation Technology</b>		<b>FORMAT- 3</b>	<b>Sheet No. 1/4</b>
<b>Branch</b>	<b>Computer Science and Engineering</b>		<b>Semester</b>	<b>VI</b>
<b>Course Code</b>		<b>Course Name</b>	<b>Computer Graphics and Animation Technology</b>	
<b>Course Outcome 1</b>	<b>Explain the concept of Computer Graphics and their algorithms.</b>		<b>Hrs</b>	<b>Marks</b>
<b>Learning Outcome 1</b>	<b>Understand Basics of Computer Graphics</b>		<b>06</b>	<b>10</b>
<b>Contents</b>	Definition of Computer Graphics, Application of Computer Graphics , Graphics Hardware, Overview of Display Devices, Raster and Random Scans Systems.			
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 1</b>			
<b>Learning Outcome 2</b>	<b>Classify Line-drawing Algorithms.</b>		<b>09</b>	<b>10</b>
<b>Contents</b>	Points and Lines,Line-drawing Algorithms, DDA Algorithm , Bresenham's line Algorithm			
<b>Method of Assessment</b>	<b>Internal Lab Test Practical Observation.</b>			
<b>Learning Outcome 3</b>	<b>Demonstrate 2D and 3D Transformations.</b>		<b>06</b>	<b>10</b>
<b>Contents</b>	Translation, Rotation, Scaling, Shear, Reflection.			
<b>Method of Assessment</b>	<b>Question Paper-Internal Progressive Test-I</b>			
<b>Course Outcome 2</b>	<b>Elaborate Clipping, Projection, Shading, Colour model and Illumination</b>		<b>Hrs</b>	<b>Marks</b>
<b>Learning Outcome 4</b>	<b>Identify Clipping Algorithm.</b>		<b>06</b>	<b>10</b>
<b>Contents</b>	Point Clipping, Line Clipping -Cohen-Sutherland Clipping algorithm.,Polygon Clipping: Sutherland Hodgeman Algorithm			
<b>Method of Assessment</b>	<b>Question Paper-Internal Progressive Test-II</b>			
<b>Learning Outcome 5</b>	<b>Compare Various Projection Techniques in detail.</b>		<b>06</b>	<b>10</b>

<b>Contents</b>	Parallel Projection: Orthographic, Axonometric, Oblique Perspective Projection: Standard Perspective Projection, General Perspective Projection, Vanishing Points		
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 2</b>		
<b>Learning Outcome 6</b>	<b>Organize Shading and Colour model in detail.</b>	06	10
<b>Contents</b>	Chromaticity diagram- RGB, CMY, HSV, HLS Illumination models, shading models for polygons, Gouraud and Phong shading		
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 3</b>		
<b>Course Outcome 3</b>	<b>Illustrate Fundamental Multimedia Technology and Graphics Image File Formats.</b>	Hrs	Marks
<b>Learning Outcome 7</b>	<b>Explain Fundamental Multimedia Technology.</b>	06	10
<b>Contents</b>	Concepts of Multimedia: Types, Hardware and Software Requirements and Applications, Multimedia Authoring and their tool, MIDI File Formats, MIDI Hardware and Software.		
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 4</b>		
<b>Learning Outcome 8</b>	<b>Discuss Over view of Types of compression.</b>	06	10
<b>Contents</b>	Over view of Types of compression Technique(Lossy and Lossyless), Video Compression , MPEG and JPEG Compression Basics Hypertext and Hypermedia.		
<b>Method of Assessment</b>	<b>Internal –Term Work Assignment.</b>		
<b>Learning Outcome 9</b>	<b>Distinguish Graphics Image File Formats.</b>	06	10
<b>Contents</b>	Raster Format, Bitmap (BMP ) Format, Graphics Interchange Format (GIF), Joint Photographic Experts Group (JP EG), Tagged Image File Format (TIFF), Portable Network Graphics (PN G) and their differences		
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 5</b>		
<b>Course Outcome 4</b>	<b>Illustrate fundamental of animation and their technology.</b>	Hrs	Marks

<b>Learning Outcome 10</b>	<b>Understand the need of Animation.</b>	06	10
<b>Contents</b>	Principles of Animation, characteristics of animations, Applications of Animation, limitation of animation.		
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 6</b>		
<b>Learning Outcome 11</b>	<b>Classify various animation techniques.</b>	06	10
<b>Contents</b>	Types of animation: Traditional Animation, 2D animation, 3D animation, motion graphics, and stop motion animation, text animation.		
<b>Method of Assessment</b>	<b>Question Paper -External- RGPV End Sem Theory Exam 7</b>		
<b>Learning Outcome 12</b>	<b>Make use of various techniques for animation.</b>	09	10
<b>Contents</b>	Animation techniques: techniques to create animation, Key framing, Stage, Timeline, Deformations, Character Animation, Physics-Based Animation, Procedural Techniques, Groups of Objects.		
<b>Method of Assessment</b>	<b>Internal Lab Test Practical Observation.</b>		
<b>Course Outcome 5</b>	<b>Develop 2D animation applications.</b>	Hrs	Marks
<b>Learning Outcome 13</b>	<b>Select software for computer animation.</b>	09	10
<b>Contents</b>	<ul style="list-style-type: none"> <li>• 2D animation software, 2D Animation- introduction with Visual Studio Flash, Animaker, pencil2d,CrazyTalk Animator, flipbook.</li> <li>• 3D Animation- Introduction to blender- work environment.</li> </ul>		
<b>Method of Assessment</b>	<b>External Lab Test Observation</b>		
<b>Learning Outcome 14</b>	<b>Apply 2D computer animation techniques</b>	09	10
<b>Contents</b>	Flash Basics: Flash Work Flow, Animation Using Flash. The Flash Work Environment: The Stage and the Time Line, Symbols and Instances, Symbols and Interactive Movies, Using the Tool Box, Using Working the Frames using time line.		
<b>Method of Assessment</b>	<b>External Lab Test Observation</b>		

<b>Learning Outcome 15</b>	<b>Create 2D computer animation application.</b>	09	10
<b>Contents</b>	Creating Animations: Creating Key Frames, Layers in Animations, Frame Rates, Frame Rates, and Steps for creating animations. Frame by Frame Animations.		
<b>Method of Assessment</b>	<b>External Lab Test Observation</b>		

### **PRACTICAL FOR ANIMATION:**

1. Write a program for 2D line drawing using DDA Algorithm.
2. Write a program for 2D line drawing using Brsenham's Algorithm.
3. Create animations using Adobe FLASH. Flash Drawing and Painting Tools. Flash Drawing Modes. Pencil Tools.
4. Importing artwork into Flash.
5. Perform smiling face/Angry face animation using flash.
6. Draw the moving Car/Bike/Cycle on the screen.

### **BOOKS RECOMMENDED.**

- Computer Graphics, Multimedia and Animations by Malay K. Pakhira, PHI Learning
- Computer Graphics by Donald Hearn and M. Pauline Baker, PHI
- Computer Graphics Principles and Practices second edition by James D. Foley, Andeies van Dam, Stevan K. Feiner and Johb F. Hughes, 2000, Addition Wesley.
- <https://www.technicalcube.in/animation-book-pdf-download>
- Introduction to Computer Graphics By N. Krishnamurthy T.M.H
- Graphics, GUI, Games & Multimedia Projects in C by PIlania & Mahendra, Standard Pub
- Newman W.M. and Sproull R.F., " Principles of Interactive Computer Graphics ", Second Edition, *Tata McGraw Hill Publishing Company Limited, New Delhi,*
- Multimedia on the PC, Sinclair, BPB
- Multimedia in Practice by Jeff coate Judith, 1, PHI.
- •Multimedia Systems by Koegel, AWL
- Multimedia Making it Work by Vaughar, etl
- Principles of Multimedia by Ranjan Parekh, *Tata McGraw Hill Education Private Limited, New Delhi.*

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				1	1	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		Explain the concept of Computer Graphics and their algorithms.											
<b>LO Description</b>		Understand Basics of Computer Graphics.											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	<ul style="list-style-type: none"> <li>Definition of Computer Graphics, Application of Computer Graphics ,</li> <li>Graphics Hardware, Overview of Display Devices, Raster and Random Scans Systems.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>END SEM THEORY EXAM</b>	Question Paper .	10	Test Paper			External						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				1	2	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		Explain the concept of Computer Graphics and their algorithms.											
<b>LO Description</b>		Classify Line-drawing Algorithms.											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>						<b>Remarks</b>	
1	<ul style="list-style-type: none"> <li>Points and Lines, Line-drawing Algorithms, DDA Algorithm, Bresenham's line Algorithm.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	9	0	Handouts / Books / E-Contents,						Teacher may use working animation for Searching techniques.	
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>LAB WORK</b>	Student will be asked to write program for line drawing algorithm.	10	Lab Test			Internal						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				1	3	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		Explain the concept of Computer Graphics and their algorithms.											
<b>LO Description</b>		Demonstrate 2D and 3D Transformations.											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	<ul style="list-style-type: none"> <li>Translation, Rotation, Scaling, Shear, Reflection.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>PROGRESSIVE TEST-I</b>	Student will be asked to perform Translation, Rotation, Scaling, Shear, Reflection.	10	Test Paper/Quiz			Internal						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				2	4	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Elaborate Clipping, Projection, Shading, Colour model and Illumination.</b>											
<b>LO Description</b>		<b>Identify Clipping Algorithm.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	<ul style="list-style-type: none"> <li>Point Clipping, Line Clipping - Cohen-Sutherland Clipping algorithm., Polygon Clipping: Sutherland Hodgeman Algorithm.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>PROGRESSIVE TEST-II</b>	Student will be asked to clipping on given coordinates.	10	Test Paper			Internal						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				2	5	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Elaborate Clipping, Projection, Shading, Colour model and Illumination.</b>											
<b>LO Description</b>		<b>Compare Various Projection Techniques in detail.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>						<b>Remarks</b>	
1	<ul style="list-style-type: none"> <li>Parallel Projection: Orthographic, Axonometric, Oblique</li> <li>Perspective Projection: Standard Perspective Projection, General Perspective Projection ,Vanishing Points..</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents						NIL	
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>END SEM THEORY EXAM</b>	Student will be asked to perform various projection on given coordinates.	10	Test Paper			External						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													
<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				2	6	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											

<b>CO Description</b>	<b>Elaborate Clipping, Projection, Shading, Colour model and Illumination.</b>
<b>LO Description</b>	<b>Organize</b> Shading and Color model in detail.

### SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract./ Tut. Hrs	LRs Required	Remarks
1	<ul style="list-style-type: none"> <li>Chromaticity dia gram- RGB, CMY, HSV, HLS</li> <li>Illumination models, shading models for polygons, Gouraud and Phong shading.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents	NIL

### SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	<b>END SEM THEORY EXAM</b>	Student will be asked to define NLP and various techniques used in NLP.	10	Test Paper	External

### ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

--

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				3	7	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Illustrate Fundamental Multimedia Technology and Graphics Image File Formats.</b>											
<b>LO Description</b>		<b>Explain Fundamental Multimedia Technology.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	<ul style="list-style-type: none"> <li>Concepts of Multimedia: Types, Hardware and Software Requirements and Applications, Multimedia Authoring and their tool, MIDI File Formats, MIDI Hardware and Software.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>END SEM THEORY EXAM</b>	Student will be asked to explain Types, Hardware and Software Requirements and Applications, Multimedia.	10	Test Paper			Internal						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				3	8	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Illustrate Fundamental Multimedia Technology and Graphics Image File Formats.</b>											
<b>LO Description</b>		<b>Discuss Over view of Types of compression.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>						<b>Remarks</b>	
<b>1</b>	<ul style="list-style-type: none"> <li>Over view of Types of compression Technique(Lossy and Lossyless),</li> <li>Video Compression , MPEG and JPEG Compression Basics</li> <li>Hypertext and Hypermedia</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents						NIL	
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
<b>1</b>	<b>TERM WORK</b>	Student will be asked to explain types of compression.	<b>10</b>	<b>Assignment/Quiz</b>			<b>Internal</b>						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				3	9	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Illustrate Fundamental Multimedia Technology and Graphics Image File Formats.</b>											
<b>LO Description</b>		<b>Distinguish Graphics Image File Formats.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
<b>1</b>	<ul style="list-style-type: none"> <li>• Raster Format, Bitmap (BMP ) Format, Graphics Interchange Format (GIF),</li> <li>• Joint Photographic Experts Group (JP EG), Tagged Image File Format (TIFF),</li> <li>• Portable Network Graphics (PN G) and their differences.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
<b>1</b>	<b>END SEM THEORY EXAM</b>	Student will be asked to write note on Image File Formats.	<b>10</b>	<b>Test Paper</b>			<b>External</b>						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				4	10	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Illustrate fundamental of animation and their technology.</b>											
<b>LO Description</b>		<b>Understand the need of Animation.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>						<b>Remarks</b>	
<b>1</b>	<ul style="list-style-type: none"> <li>Principles of Animation, characteristics of animations, Applications of Animation, limitation of animation.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E- Contents						NIL	
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
<b>1</b>	<b>END SEM THEORY EXAM</b>	Student will be asked to list application and limitation of animation.	<b>10</b>	<b>Test Paper</b>			<b>External</b>						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				4	11	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Illustrate fundamental of animation and their technology.</b>											
<b>LO Description</b>		<b>Classify various animation techniques.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>						<b>Remarks</b>	
1	<ul style="list-style-type: none"> <li>Types of animation: Traditional Animation, 2D animation, 3D animation, motion graphics, and stop motion animation, text animation..</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E-Contents						NIL	
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>END SEM THEORY EXAM</b>	Student will be asked to list types of animation.	10	Test Paper			External						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				4	12	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Illustrate fundamental of animation and their technology.</b>											
<b>LO Description</b>		<b>Make use of various techniques for animation.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
<b>1</b>	<ul style="list-style-type: none"> <li>Animation techniques: techniques to create animation, Key framing, Stage, Timeline, Deformations, Character Animation, Physics-Based Animation, Procedural Techniques, Groups of Objects.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	9	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
<b>1</b>	<b>LAB WORK</b>	Student will be asked to list animation techniques used to create animation.	<b>10</b>	<b>Lab Assignment</b>			<b>Internal</b>						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				5	13	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		<b>Develop 2D animation applications.</b>											
<b>LO Description</b>		<b>Select software for computer animation.</b>											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>						<b>Remarks</b>	
<b>1</b>	<ul style="list-style-type: none"> <li>2D animation software, 2D Animation- introduction with Visual Studio Flash, Animaker, pencil2d,CrazyTalk Animator, flipbook.</li> <li>3D Animation- Introduction to blender- work environment.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	9	0	Handouts / Books / E- Contents						NIL	
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
<b>1</b>	<b>END SEM PRACTICAL</b>	Student will be asked uses of various animation software.	<b>10</b>	<b>Lab Test Paper</b>			<b>External</b>						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				5	14	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		Develop 2D animation applications.											
<b>LO Description</b>		Apply 2D computer animation techniques.											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	<ul style="list-style-type: none"> <li>Flash Basics: Flash Work Flow, Animation Using Flash.</li> <li>The Flash Work Environment: The Stage and the Time Line, Symbols and Instances, Symbols and Interactive Movies, Using the Tool Box, Using Working the Frames using time line.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	9	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>END SEM PRACTICAL</b>	Student will be asked various method for 2D animation creation.	10	Lab Test Paper			External						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No. <b>4</b>
					C	0	4				5	15	
<b>Course Name</b>		<b>COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY</b>											
<b>CO Description</b>		Develop 2D animation applications.											
<b>LO Description</b>		Create 2D computer animation application.											
<b>SCHEME OF STUDY</b>													
<b>S. No.</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract./ Tut. Hrs</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	<ul style="list-style-type: none"> <li>Creating Animations: Creating Key Frames, Layers in Animations, Frame Rates, Frame Rates, and Steps for creating animations. Frame by Frame Animations.</li> <li>Publishing and Exporting.</li> </ul>	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	9	0	Handouts / Books / E-Contents	NIL						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No.</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>	<b>Maximum Marks</b>	<b>Resources Required</b>			<b>External / Internal</b>						
1	<b>END SEM PRACTICAL</b>	Student will be asked basic 2D animation using flash software.	10	Lab Test Paper			External						
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													